

**SAFETY MANUAL FOR FRA
SURVEY VEHICLES**

**AUTOMATED TRACK INSPECTION
PROGRAM (ATIP)**



Effective

May 20, 2005

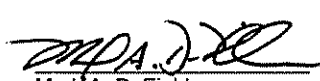
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ENSCO, Inc. SAFETY MANUAL

The safety rules set forth in this manual govern all Federal Railroad Administration (FRA) survey vehicles operated by ENSCO, Inc. under current or named contract DOT-FR53-02-D-00072. In addition, these safety rules provide guidelines for all ENSCO employees, FRA personnel, and all other personnel working on or visiting the survey vehicles. These rules are effective as of the date that the FRA Office of Safety concurs, and supersede all previous safety rules and regulation.

Special instructions may be issued by the proper authorities at any time and will be sequenced consecutively from the beginning to the end of the contract

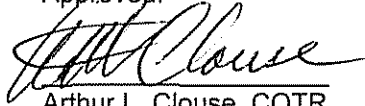


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FOREWORD

The railroad environment is a hazardous working environment. Thousands of people have lost their lives working in this environment. Tens of thousands more have been seriously injured.

The majority of deaths and injuries were caused by human error. The person who made the error was not always the person who paid the price. Virtually all of these deaths and injuries were preventable.

ENSCO, Inc. is continuously working to maintain and improve the safety of FRA survey and maintenance operations and to protect its employees from injury.

The Rules in this Safety Manual are a compilation of our experience and the experience of others working in this environment. Some of these Rules are FRA rulings from the Code of Federal Regulations. Some of them are rules common to railroads over which we operate. Some of the rules are directly related to ENSCO's experience operating survey vehicles and other track equipment on the nation's track over the past 30 years.

The rules contained herein do not replace any railroad safety procedures, but serve to reinforce railroad industry procedures which are directly applicable to ENSCO employees. Rules published in CFR 49 PART

214; Part 218, Subpart B; Part 219, Subpart B as well as applicable railroad operating and safety rules are to be followed where applicable.

It is your responsibility to be alert and exercise proper judgment and common sense to perform your work safely. If you are ever in doubt concerning your safety, contact your supervisor.

Since your safety is most important, we ask that you carry out the rules set forth herein and set a working example not only for your colleagues, but also for the railroad industry. Report any unsafe practices or conditions, which, in your opinion, should be remedied, to your supervisor.

Our experience shows that we can accomplish our mission safely. By your sincere cooperation and safety consciousness in obeying these rules, we hope to continue the achievement of an unblemished safety record.

GENERAL RULES

- a. Safety is the first consideration in the performance of your duty.
- b. Knowledge of and obedience to the rules contained herein are essential to safety.

- c. ENSCO employees shall act in a professional and courteous manner at all times.
- d. In case of doubt or uncertainty of work procedures, the safest course must be taken
- e. Never assume that you are protected by any safety device or procedure unless you have direct knowledge that the device is in use or the procedure is being followed.
- f. All ENSCO employees are required to have a copy of these rules while on field duty and must understand and obey them. Questions regarding these rules shall be directed to the ENSCO Safety Officer or his Alternate for an explanation.
- g. All employees and visitors assigned to or visiting the survey vehicles must receive a safety briefing by the Survey Director covering the rules that must be observed while on or near the survey vehicles.
- h. The use of or being under the influence of intoxicants, narcotics, or dangerous drugs by employees when on duty or when subject to duty, is prohibited. Possession of intoxicants, narcotics, or dangerous drugs or participation in any transaction involving the same by employees on duty or on Government or railroad property is prohibited and subject to disciplinary action, including dismissal.
- i. The use of any medication, including those prescribed or dispensed by physicians, that will

affect an employee's alertness, coordination, reaction, judgment, vision, or ability to perform their work properly will be reported to the Safety Officer.

Said persons will be relieved of hazardous assignments

- j. Any violation of these rules or any unsafe condition should be reported promptly to the Safety Officer.
- k. Employees who persist in unsafe practices and place themselves or others in jeopardy will be subject to disciplinary action including dismissal.
- l. Employees must not rely solely upon the carefulness of others, but must protect themselves when their own safety is involved

<p>NO JOB IS SO URGENT THAT SUFFICIENT TIME CANNOT BE ALLOWED TO PERFORM ALL WORK SAFELY.</p>
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- m. All employees visiting any railroad facility will obey and comply with the safety rules and regulations established by that facility
- n. The carrying or possession of firearms, or other weapons while on duty or on Government or railroad property is prohibited. Small knives that are used as a tool for work purposes are the exception to this rule.

- o. Suggestions to improve safety conditions or procedures should be addressed to the Safety Officer

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1. RESPONSIBILITIES AND VIOLATIONS

1.1 Safety is every person's primary responsibility.

1.2 Violations of Safety Rules or any other unsafe condition should be reported to the Safety Officer or the Alternate Safety Officer

1.3 The Safety Officer or Alternate Safety Officer will enforce the safety rules and will take corrective action in the event of any accidents or incidents.

1.4 While a FRA survey vehicle is being operated within the scope of an Operations Plan, the Survey Director is the Alternate Safety Officer. During all other non-survey activities, the senior ENSCO operations or maintenance person on-board will advise the Alternate Safety Officer

1.5 The Alternate Safety Officer for FRA Survey Vehicles will be responsible for all matters relating to ENSCO operations and maintenance safety matters. Appropriate corrective action will be taken immediately in the event of any safety violation. A written report to the Safety Officer will be made on each such violation. Non-ENSCO personnel involved in safety violations will be reported to the FRA or to the appropriate railroad.

1.6 The assignment of a Alternate Safety Officer for FRA track survey vehicles activities does not, in any way, relieve each person of their responsibility to be constantly alert for potentially dangerous conditions and to report such conditions to the Safety Officer or Alternate

1.7 All personnel notified by railroad personnel that they are in violation of a railroad safety rule must take appropriate corrective action and must report the incident to the Safety Officer or Alternate

1.8 Persistent violation of a safety rule by ENSCO personnel may be grounds for disciplinary action

1.9 Ignorance of any safety rule is not an excuse for violation of the rule.

2. PERSONAL CONDUCT

2.1 Personnel will conduct themselves in a professional manner.

2.2 Scuffling, horseplay, practical jokes, wrestling, running and all conduct of a similar nature while on duty or on railroad or Government property is prohibited.

2.3 Employees must exercise care to avoid injury to themselves and others by observing the condition of equipment (and the tools that they use in performing their duties) and, when found defective, will, if practicable, put them in a safe condition, or report the defects to their supervisor.

2.4 Personnel must remain alert for the movement of trains, locomotives, cars or other equipment at any time, on any track, in either direction.

2.5 Employees are prohibited from doing any work in a manner that might jeopardize their safety.

2.6 Employees are expected, during their off-duty time, to obtain ample rest in order to be physically and mentally fit for the proper and safe performance of their duties.

2.7 Employees will not report to work under the influence of any substance that affects their judgment or ability to work safely.

2.8 When on track survey vehicles or locomotives, watch and be prepared for any sudden start, stop, lurch or jerk of the equipment

2.9 When getting on or off any track survey vehicle or locomotive, face that vehicle, use both hands and have secure handholds and firm footing, utilizing the three-point contact.

2.10 Carrying tools, materials or any objects which prevent secure handholds or interfere with the safe boarding or alighting from the vehicle is prohibited.

2.11 Look in both directions before alighting from FRA survey vehicles.

2.12 Avoid rubbing bare skin with hands or gloves while handling corrosive or acidic materials. Wear gloves when handling heavy metal objects, e.g., derails.

2.13 ENSCO employees are strictly forbidden from working alone on survey vehicles at any time or for any reason without advance review and approval by the Safety Officer to assure conditions are safe and work to be performed is not hazardous. In any case, a working cellular phone must be available and the employee must be trained in its use. Otherwise, at least one other person must be in the vicinity of the FRA survey vehicle at all times.

2.14 Stepping or jumping across open pits is prohibited

2.15 Walking, sitting or stepping on rails, frogs, switches, guardrails, interlocking machinery or connections is prohibited

WARNING:

Switches pose a special hazard as they may be remotely activated.

2.16 Walking through steams which obscure vision should be avoided whenever possible.

2.17 Never carry an object in such a way as to obstruct your vision. Get help.

2.18 Never wear articles or use any electronic equipment that impairs your hearing

2.19 Avoid standing or walking on tracks except when necessary in the performance of your duty and on-track safety procedures are in place.

2.20 Be alert for under foot conditions and avoid objects, obstructions, holes and openings that may cause you to trip, slip or fall.

- 2.21 Getting on and off turntables or any railroad equipment in motion is prohibited
- 2.22 Leaning against standing cars or locomotives is prohibited.
- 2.23 Never cross a track or stand within 25 feet of standing equipment.
- 2.24 Never cross a track by going over, under, between or through standing equipment. Go around.
- 2.25 Throwing of articles (littering) from FRA survey vehicles, locomotives, or moving equipment is prohibited
- 2.26 Employees must not enter into altercations with any person, regardless of provocation, but will make note of and report such incidents in writing to their immediate supervisor.
- 2.27 Umbrellas or other vision impairing objects must not be used or carried.
- 2.28 Hands must be kept out of pockets when ascending or descending from railroad equipment
- 2.29 Running while on railroad property or on the FRA survey vehicles is prohibited.

2.30 Individuals with long hair shall take precautions to avoid entangling it in moving machinery. Long hair shall be arranged on top or behind the head to avoid interference with vision and to prevent injuries while working on or about the survey vehicles.

3. PERSONAL SAFETY EQUIPMENT AND REQUIREMENTS

3.1 Always use and maintain in good working order, all required personal safety equipment.

3.2 ENSCO employees must wear head protection (bump cap or hard hat) while working under survey vehicles. The use of head protection is recommended at all times when personnel are working outside track survey vehicles. Ref: CFR 49 Part 214.113

3.3 ENSCO operations and maintenance personnel while on, about or under survey vehicles or on railroad property will wear boots that lace over shoe tongue to the boot top, and have Vibram or other similar soles with deep tread for traction and a definite heel. Safety toed boots are recommended for all ENSCO employees having business on or about track survey vehicles. Ref: CFR 49; Part 214.115

3.4 ENSCO personnel will not be permitted on track survey vehicles wearing the following footwear: open toed shoes or sandals, canvas or cloth shoes, shoes with thin or loose soles, shoes with wedge type or high heeled soles, unbuckled overshoes, or any type of shoe that provides negligible resistance to impact or puncture. Athletic, tennis, gym or walking shoes are not permitted.

3.5 ENSCO employees shall wear eye protection while working under the track survey vehicles in a

position where dirt may fall into the eyes, near moving machinery, diesels, drills, grinders, and when using forced or compressed air for any purposes. Ref: CFR 49 Part 214.117

3.6 Use of hard hats and eye protection is required in all maintenance/repair shops and is recommended for use at all times while on duty, the exception being while inside the track survey vehicle.

3.7 Contact lenses are not a substitute for goggles or safety glasses. The use of plastic contact lenses is discouraged.

3.8 The following present safety hazards and shall not be worn:

3.8.1 Neckwear and jewelry that may become entangled or caught in machinery.

3.8.2 Hand or wrist jewelry when working near or with electrical or mechanical equipment

3.8.3 Torn, loose, or baggy clothing, or loose-hanging shirt sleeves when working around moving parts of machinery

3.8.4 Short trousers (cutoffs, walking shorts).

3.8.5 Clothing saturated with oil, grease, or other flammable substances.

3.9 ENSCO crew members must be dressed to perform their duties safely. Clothing must provide protection from the sun, weather, abrasion, scratches and insects. The following shall be worn by crew members while working on, about or under FRA track survey vehicles:

3.9.1 Work uniforms are to be made of materials consisting primarily of cotton or wool (this includes coveralls and jackets).

3.9.2 Long pants or trousers covering legs to boot tops.

3.9.3 Long or short sleeve, waist length shirts, with shirt tucked into trousers. No T-shirts will be worn.

3.10 Gloves, or mittens, must be worn while handling rough, heavy or corrosive materials.

3.11 All ENSCO Operations and Maintenance personnel assigned to duty on track survey vehicles will receive First Aid and CPR training (with renewal every two years).

3.12 Clothing and headgear shall not impair vision or hearing.

4. FRA TRACK SURVEY VEHICLE SAFETY EQUIPMENT AND EQUIPMENT REGULATIONS

4.1 The Safety Officer or Alternate will be responsible for the installation and upkeep of safety equipment on-board track survey vehicles.

4.2 Safety Equipment for track survey vehicles includes as a minimum:

4.2.1 Hard hats (minimum = eight (8)):

4.2.2 Safety goggles or glasses (one pair per ENSCO employee):

4.2.3 Stretcher

4.2.4 Fire axe (one per car)

4.2.5 Fire extinguishers (two per car plus one in each kitchen)

4.2.6 First Aid Kit (one per car)

4.2.7 Red Cross First Aid Manual (one per car)

4.2.8 Cardiopulmonary Resuscitation Manual

4.2.9 Safety Manual (one per car)

4.2.10 Adequate flagging equipment: 12 red fusees, 2 red flags. (Containers for two sets of this equipment)

4.2.11 Four FRA-owned blue lanterns

4.2.12 Two blue flags

4.2.13 Two red flags

4.2.14 Two Portable FRA-owned derails

4.2.15 Four FRA-owned switch locks

4.2.16 Smoke Detector (one per car)

4.3 All safety equipment will be properly stocked and kept in good working order at all times.

4.4 All desks, file cabinets, storage cabinets, work benches, large appliances, etc., must be securely attached to the floor and/or walls of the FRA survey vehicle.

4.5 Except when in use, all cabinet doors must be closed and latched while track survey vehicles are moving.

4.6 No heavy items are to be stored on top of cabinet, work benches, table tops, appliances, etc., unless they are securely attached.

4.7 All heavy FRA survey vehicle spares such as brake shoes, brake valves, brake units, etc., must be stored in the appropriate locker.

4.8 No repairs to heavy solid items such as a gage box will be made while the vehicle is moving unless the unit is secured firmly to the bench vise while the work is being performed.

4.9 Interior lights are to be on after dark while personnel are working on-board the track survey vehicle while in non-survey status.

4.10 External equipment of track survey vehicles must be mounted, maintained, operated and inspected in accordance with applicable FRA, ENSCO and/or AAR requirements.

5. USE OF BLUE FLAG AND DERAILS

5.1 Neither FRA nor contractor employees will operate a railroad switch or derail and will rely upon a railroad employee to perform that function. Protective devices (i.e., blue signal, derails, and locking devices, owned by FRA) will be applied by contractor employees after receiving authority for placement from the appropriate railroad representative. A "blue signal" will be displayed on or near the track survey vehicle control stand at a readily visible location and the "key" removed when on ground instrument verification (I-V's) checks are made. Similarly, positive protection (brakes placed in emergency position and surrendering of the locomotive reverser) will be imposed by the contractor when the track survey vehicle is towed by a locomotive.

5.2 Except within a locomotive servicing area or car shop area, the track survey vehicle may be repositioned by the FRA, at anytime on a track or portion of a track that is exclusively occupied by the track survey vehicle and protected by FRA-owned devices.

5.3 Within a locomotive servicing area or car shop area, a "railroad blue signal rules" will be in place and complied with, to protect "anyone" on, under or about the track survey vehicle. The track survey vehicle may be repositioned, only after the movement is authorized by the railroad employee-in-charge of the workmen and approved by the FRA.

5.4 When unoccupied and at the request of FRA, FRA track survey vehicle protection will be provided by the railroad. Additionally, the FRA track survey vehicle will not be relocated or coupled to other rolling equipment without permission by the FRA. To prevent undesirable access, a remotely controlled or manually operated switch providing entrance to the track occupied by the FRA track survey vehicle will be aligned against movement to that track.

Where provided, electrical or mechanical blocking devices will be used on the switch and signal controls. Additionally, the switch will be secured with an effective locking device, exclusive to FRA. The switch stand's operating mechanism will be equipped with a visible all-weather display tag warning any users, "**Out of Service-Do Not Operate.**"

If a switch cannot be aligned and locked, as described, derails capable of restricting access will be used instead of an effective locking device. The placement¹ of front and rear "portable train control" signs will be displayed in the center of the track, adjacent to derails, marking the presence of the track survey vehicle. A track survey vehicle wheel will be securely chocked to prohibit movement on its own.

¹ Protective devices, owned by FRA, will be placed not less than 150-feet from each end of the FRA survey vehicle, where appropriate

5.4 If another person or railroad employee has hung a blue signal (lantern, flag, etc.) on a FRA-owned blue flag, the blue flag may not be removed until the other person or railroad employee has first removed their blue signal from the FRA-owned flag

5.5 If a stop is made for any reason that requires outside activity by any person while the track survey vehicle is operating in the self-propelled mode, an emergency application of the brakes will be made. If the operator leaves his position, he will apply a blue signal to the controls

5.6 While track survey vehicles are coupled to one or more locomotives, the Forward Observer, with means of verbal communications with the survey vehicles will be present in the locomotive cab at all times when ENSCO employees are working under the vehicles or in any location where train movement could cause injury. The brakes must be set in emergency from the controlling locomotive and on the track survey vehicle to assure that the consist is not moved. The Forward Observer will take custody of the locomotive reverser. The reverser will be returned and the brake system will be restored only after all work under the vehicles is known to be completed and personnel are clear.

6. YARD RULES (INACTIVE SURVEY STATUS)

6.1 When authorized or marked paths or routes to shops, stations, yards, etc , are provided, the use of other paths, routes or shortcuts is prohibited.

6.2 Look in both directions before crossing any track.

6.3 Highway vehicles used by ENSCO personnel shall be parked in designated areas and shall not be left in a position where property damage or injury may result.

6.4 Avoid stepping on or walking on surfaces made slippery by grease, oil, water or similar substances.

6.5 ENSCO employees are strictly forbidden from working on top of the FRA survey vehicles when in overhead (catenary) electrified track.

6.6 ENSCO employees are strictly forbidden from working outside or under FRA survey vehicles (which include repairs and instrumentation verifications) when on a track electrified by third rail.

6.7 All track survey vehicle exterior exit doors will remain unlocked while cars are occupied to provide emergency exits if necessary.

6.8 An adequate number of emergency exits shall be provided and maintained on each FRA survey vehicle.

6.9 Emergency safety equipment shall not be removed from the FRA survey vehicles for repair or inspection without providing temporary replacement of same.

6.10 Do not operate the diesel generators in enclosures unless there is sufficient ventilation to carry off all exhaust gases.

7. OPERATIONAL SAFETY (SURVEY STATUS)

7.1. Movement of Train

7.1.1 It is the responsibility of the Survey Director to authorize all train movement during Survey Operations. The Survey Director will account for all personnel associated with the operation prior to movement. Once the location and safety of all personnel are known, the Survey Director will notify the Engineer Pilot, or other designated railroad person, and the Forward Observer, that the consist is available for movement.

7.1.2 The designated railroad person then authorizes/initiates movement based on railroad procedures.

The Survey Director cannot cause the consist to move. That is the responsibility of the railroad operators according to their standard operating and safety rules. Under no circumstances shall the Survey Director's authorization to move be construed by railroad personnel to supersede any of the railroad's standard safety and operating rules or procedures.

7.2. General Rules

7.2.1 The first and most important duty of the Forward Observer and/or Operator is to ensure the safety of personnel on, about or under FRA survey vehicles.

7.2.2 If all verbal means of communication are lost between the FRA survey vehicle(s) and the Forward Observer/Driver, the Forward Observer/Driver shall have the consist stop until verbal communications can be re-established.

7.2.3 The Forward Observer may leave the locomotive when permission to do so has been granted by the Survey Director or his authorized assistant and all ENSCO personnel are on-board the FRA survey vehicle.

7.2.4 All ENSCO personnel will comply with all applicable Roadway Worker Safety Rules as outlined in 49 CFR 214 Subpart C.

7.2.5 All exterior vehicle side doors and stairwell doors (trap doors) will (normally) be kept closed while the FRA survey vehicle is in motion.

7.2.6 Avoid obstructions, close clearances and slippery conditions. Maintain a firm handhold on railings until footing is secured.

7.2.7 During vehicle uncoupling, personnel near the couplers or brake hoses affected should face away from

the break hoses so they will not be injured by flying debris that may be expelled by a release of air pressure.

7.3. Self-Propelled Mode

7.3.1 The Survey Director shall brief all railroad crew members and the FRA Operating Practices (OP) Inspectors as to the rules for FRA survey vehicles as stated in Enclosure A.

7.3.2 All Railroad rules of the carrier shall apply to the movement of FRA survey vehicles.

7.3.3 The FRA OP Inspector shall be the final arbiter as to the rules of safe movement of the FRA survey vehicle.

7.4. Towed Mode

7.4.1 During each train stop, when ENSCO personnel are to be outside FRA survey vehicles, the following will be accomplished prior to exit from the vehicle.

a. The Forward Observer shall ensure that the consist brakes are set in emergency.

b. The Forward Observer will then request the Engineer surrender the locomotive reverser and maintain custody of it, preventing any consist movement until specifically cleared by the Survey Director.

c The Survey Director shall pull the emergency brake handle located in the track survey vehicle.

7.4.2 Following completion of outside work:

a The Survey Director shall determine that all personnel are accounted for and that the doors are secure.

b The Survey Director shall then restore the emergency lever in the FRA survey vehicle and inform the Forward Observer that the consist is free to proceed.

c The Forward Observer may then return the reverser to the Engineer and allow the consist to proceed.

8. ACCIDENTS, INCIDENTS AND INJURY REPORTING

8.1 Definitions:

8.1.1 **Accident:** an unexpected event that occurs during vehicle or equipment movement resulting in loss or damage to equipment, and/or bodily personal injury

8.1.2 **Incident:** an unexpected event that could have resulted in loss or damage to equipment and/or bodily personal injury, or results in a violation of safety rules and/or standard operating procedures

8.2 The senior on-site ENSCO operations or maintenance crew member shall submit the Preliminary Accident/Incident report to ENSCO Program Management as soon as practical following an accident/incident. The first preliminary report shall be made verbally to the ENSCO Program Manager (Phone numbers appear in the Appendix). Arrangements should be made for notification of FRA program management and ENSCO follow-up contact when the Preliminary Report is submitted

8.3 Whenever an accident/incident occurs, the senior ENSCO operations or maintenance crew member on-board or at the site will supervise and coordinate all post accident/ incident activities

8.4 Defects in electrical or mechanical equipment on the track survey vehicle or defects in track, signals, or rolling stock or any unusual condition must be reported by the quickest available means to the respective ENSCO and railroad authority.

8.5 An injury of any kind, however minor, must be promptly and properly treated and reported to the Safety Officer or his Alternate to prevent further complications and to comply with rules set forth by the Workman's Compensation Board.

8.6 Do not move an injured person(s) except to remove them from a hazardous area, or, if the extent of the injuries are known and indicate that the injured person can be safely moved without further injury, or to administer required first aid.

8.7 If an accident/incident results in personal injury or death, all tools, machinery and other equipment involved, as well as the premises where the accident occurred, must be promptly inspected by the senior on-site ENSCO employee in charge. A report of the inspection, stating the conditions found and the names of the persons making the inspection, must accompany the final written Accident/incident Report.

9. HAND, FLAG, AND LANTERN SIGNALS

9.1 Any ENSCO employee responsible for directing or controlling test consist movements shall assure himself that all railroad, government, and ENSCO personnel involved have a common understanding of signals to use, to include both the means of communication and the meaning of the signal to be used, especially the exact meaning of "forward" and "reverse." Any uncertainty in the meaning of a signal or the absence of an expected signal shall be taken as a "stop" signal.

10. ELECTRICAL SAFETY

10.1 Work in connection with power supply circuits and associated apparatus will be performed only by ENSCO employees, or certified electricians.

10.2 ENSCO employees must ensure that equipment, machines or tools being used are safe to operate. This will include cables, cords, breakers, limit switches, and warning devices. The Safety Officer or his Alternate must be notified if an unsafe condition exists.

10.3 Safe practices common to all electrically powered tools include those necessary to prevent shock and burn accidents. Power cords, insulation and connections shall be frequently inspected and shall be maintained in safe condition to prevent electrical short and faults.

10.4 Electric power tools shall be UL approved and shall either be double insulated or shall be equipped with three conductor cords, one of which shall ground the frame of the tool when connected to a grounding type receptacle or otherwise attached to an adequate ground.

10.5 Electric power tools shall not be lifted or unplugged by pulling the power cord.

10.6 When a three prong plug adapter is used, the adapter grounding wire must be grounded before the tool or appliance is operated.

10.7 If machinery or electrical equipment on the survey vehicles must be de-energized in order to safely work on, repair, or troubleshoot, the equipment will be safety tagged. The person performing the work shall sign and date a **"Do Not Energize"** tag and affix it to the switch, breaker or other device controlling power to the equipment to be repaired. Only the person placing the tag may remove the tag when work is complete. No other person may operate "tagged" equipment as long as the tag is displayed. The tag shall be destroyed after use.

10.8 Employees shall not:

10.8.1 Wear rings and watches while working on any electrical equipment

10.8.2 Wear loose, ragged clothing or shoes with defective soles while working on or close to energized circuits.

10.8.3 Touch any energized electrical conductor or apparatus with their body, tools or other conductive material with the exception of proper test equipment when required. If it is necessary to remove an object from contact with a hot circuit, use rubber gloves or other known insulating material to protect yourself from electrical shocks.

10.8.4 Operate any electrical tool, appliance, or equipment, or make any adjustments, until proper

instructions in the use and care of the equipment have been received

10.8.5 By-pass fuses or circuit breakers or use a higher rated fuse in an electrical circuit.

11. FIRE PREVENTION

11.1 ENSCO employees must familiarize themselves with the location and operation of fire extinguishers and other safety equipment on the FRA survey vehicle.

11.2 Smoking is prohibited on survey vehicles, and whenever **NO SMOKING** areas are designated on railroad property.

11.3 Flammable liquids shall not be used inside the FRA survey vehicle without adequate ventilation.

11.4 Diesel generator compartments shall be checked and cleaned when necessary to prevent build up of flammable debris and fuel oil drippings.

11.5 Oily rags and similar waste shall be disposed of properly each day.

11.6 Fuel or oil saturated clothing must be laundered at the first opportunity.

11.7 Never use an open flame on or near the diesel generator compartments or fuel tanks.

11.8 Storing and transporting fuel in glass or other types of unapproved containers are prohibited.

11.9 The use of flammable liquids to clean the diesels, or for any purpose other than the specified use

for which it is furnished is prohibited. Solvents or cleaners will be used for their designated purposes.

11.10 Used engine lubricating oil shall be disposed of properly. Check with the applicable railroad for its oil disposal procedures. Do not dump used oil on the ground or in storm drain pipes.

11.11 All flammables must be stored in the FRA survey vehicles Flammable Storage Locker.

11.12 The use of gasoline for any purpose on FRA survey vehicles is strictly forbidden.

12. FIRE EMERGENCY PROCEDURE

12.1 If a fire occurs:

12.1.1 Sound the alarm.

12.1.2 Stop the train

12.1.3 Shut off the diesel generators and electrical power.

12.1.4 Ensure that all personnel not directly involved in fighting the fire are evacuated from the FRA survey vehicle.

12.1.5 The senior ENSCO crew member shall direct the fire fighting

12.1.6 Bring all fire extinguishers to the fire

12.1.7 Summon the fire department, if determined necessary

12.2 Do not use water or other liquids on electrical equipment fires or oil fires. (All FRA survey vehicle fire extinguishers are rated for A, B or C type fires.)

12.3 Following a fire, wiring or other electrical equipment must not be touched until technical personnel ensure that a shock hazard does not exist

13. GENERAL HOUSEKEEPING

13.1 Each individual is responsible for maintaining a neat and orderly work area. Professional workmanship is directly related to safety in eliminating potential hazards such as tripping over loose wire, tools, etc.

13.2 Work areas will be cleared of dirt, solder, wire scraps and other debris upon completion of a particular job or at the end of each work day, whichever comes first.

13.3 All wiring and electrical work will be completed in a neat, professional manner ensuring that an electrical shock or fire hazard does not exist.

13.4 Car aisles, vestibules, and steps will be kept clear of debris, instruments and tools except when maintenance or installation work is actually in progress.

13.5 Disposal cans will be emptied at the end of each working day. Trash will not be left on the ground, but will be disposed of in proper containers.

13.6 Bathrooms will be completely cleaned at the end of each working day. Refrigerators and other food storage areas shall be cleaned once each week ridding these areas of out-of-date or spoiled food. (These areas will be rid of all spoilable food before periods of extended, unoccupied storage). Microwave oven should be cleaned at least daily.

13.7 Ensure water that is fit for drinking is available prior to commencement of survey each day.

14. APPENDIX

ATIP PERSONNEL TELEPHONE LISTING

Name/Position	Office	After-hours
Cook, S A , ENSCO Asst Program Mgr	(703) 721-4470	(703) 768-1645 (703) 725-4482 cellular
DeFields, M A , ENSCO Asst Program Mgr	(703) 721-4523	(703) 222-8096 (910) 284-3166 cellular
Tyson, E , ENSCO Operations Mgr	(703) 321-4538	(703) 580-9224
Poteat, P , ENSCO Survey Director	(703) 321-4562	(301) 292-4843
Hobson, H , ENSCO Survey Director	(703) 321-4602	(703) 580-9224
FRA ATIP Program Manager	(202) 493-6252	(202) 744-2596
DOT 24-hr Line		(202) 366-2458